

Checkmk Synthetic Monitoring

Community Call

2024, April 30



Simon Meggle

PM Synthetic Monitoring

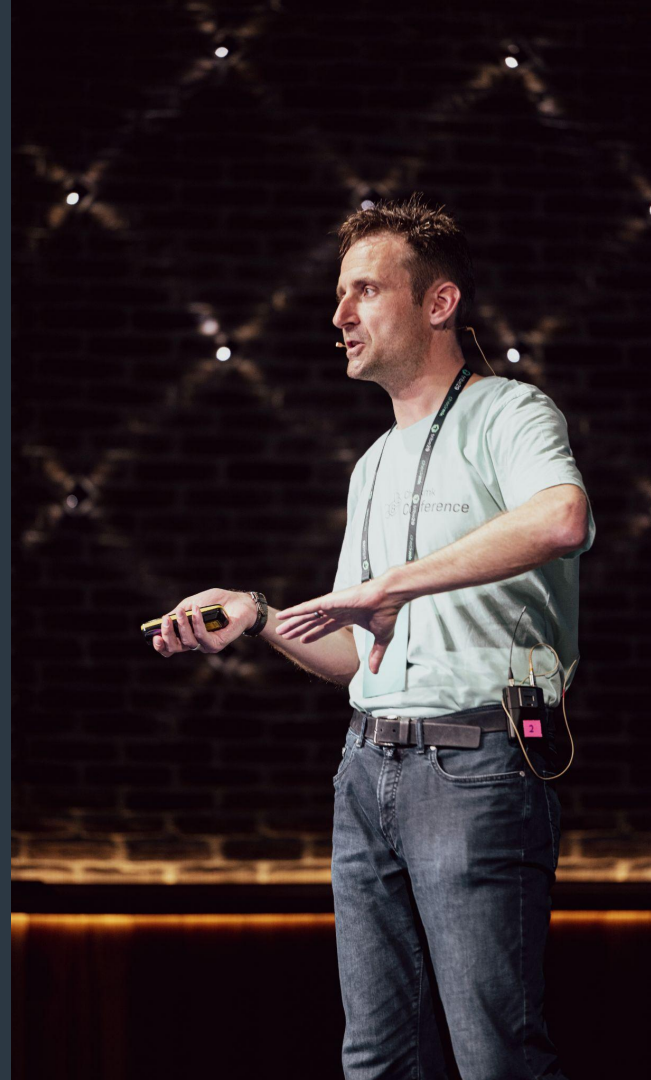
Checkmk GmbH

checkmk.com

About me

Simon Meggle

- ◆ 2000-2011: IT administrator
- ◆ 2011-2018: Monitoring consultant, employed
- ◆ Since 2018: self-employed, founded **ELABIT GmbH**
- ◆ Since 2020: Robot Framework/Robotmk
 - ◇ Robotmk Development
 - ◇ Robot workbench provider
 - ◇ Workshops/Trainings
- ◆ Since 2022: Product Manager “Synthetic Monitoring”,
Checkmk GmbH



Agenda



01 Introduction to Synthetic Monitoring

02 Robot Framework

03 Robotmk

04 **Demo:** Robotmk in Checkmk 2.3

05 Synthetic Monitoring as a Checkmk product

06 Outlook

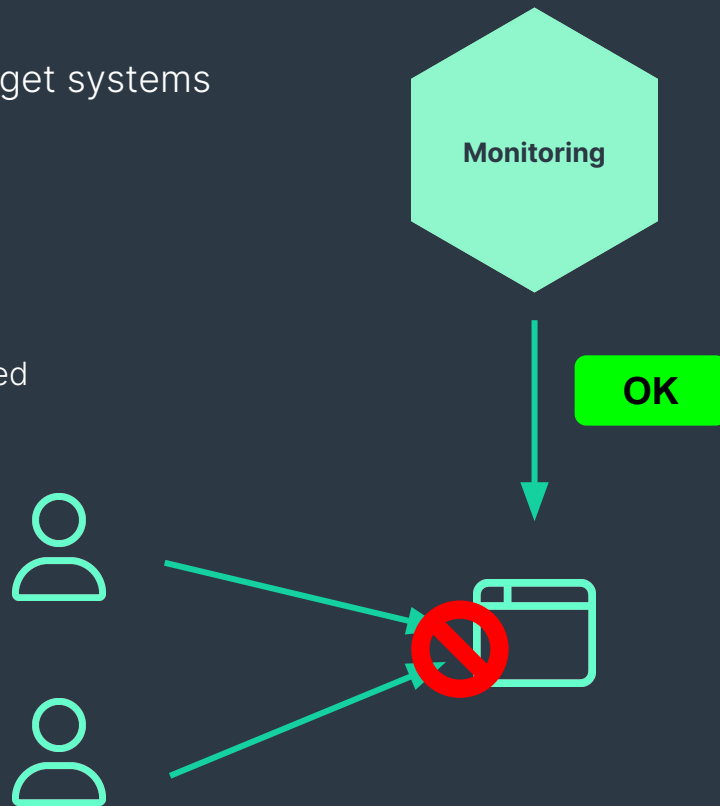
Introduction to Synthetic Monitoring



Synthetic Monitoring

What does that mean?

- Synthetically **ally** mimic interactions of users with target systems
- 3 dimensions are relevant:
 - **Availability:** do the services respond?
 - **Performance:** how is the response quality?
 - **Functionality:** does the system provide the expected functionality?



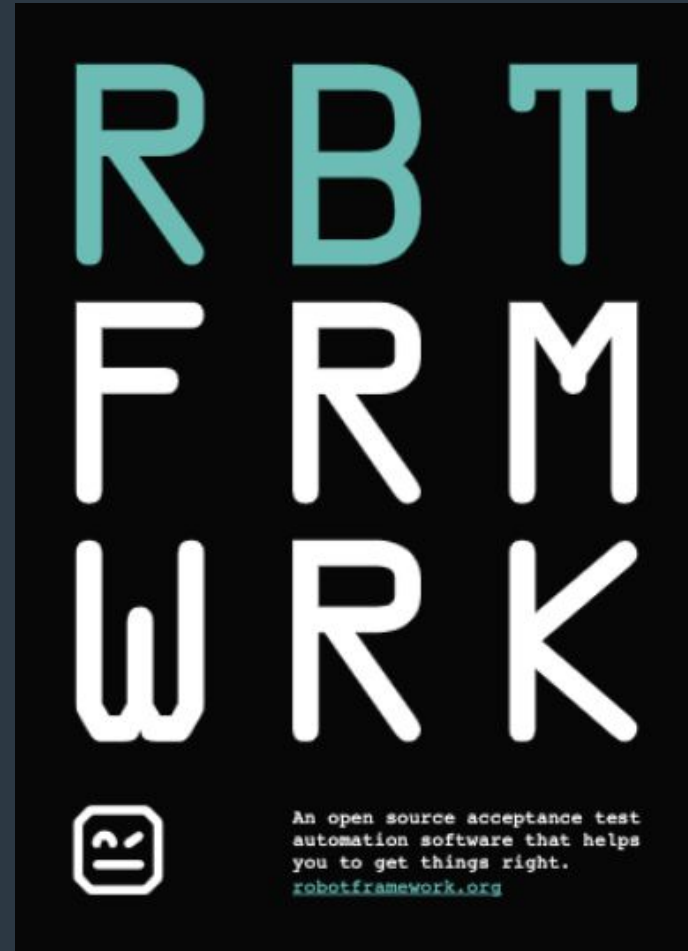
```
1 | from selenium import webdriver
2 |
3 | driver = webdriver.Chrome(r'C:\Users\drivers\chromedriver.exe')
4 | driver.maximize_window()
5 | driver.get("http://www.seleniumeasy.com/test/basic-first-form-demo.html")
6 | assert "Selenium Easy Demo – Simple Form to Automate using Selenium" in driver.title
7 |
8 | eleUserMessage = driver.find_element_by_id("user-message")
9 | eleUserMessage.clear()
10 | eleUserMessage.send_keys("Test Python")
11 |
12 | eleShowMsgBtn=driver.find_element_by_css_selector('#get-input > .btn')
13 | eleShowMsgBtn.click()
14 |
15 | eleYourMsg=driver.find_element_by_id("display")
16 | assert "Test Python" in eleYourMsg.text
17 | driver.close()
```

Robot Framework



Robot Framework

- ◆ Generic test automation framework
- ◆ Python, Open Source
- ◆ Key features:
 - ◇ **library concept**
 - ◇ **keyword driven approach**
- ◆ Outstanding:
 - ◇ Community
 - ◇ Foundation



Robot Framework

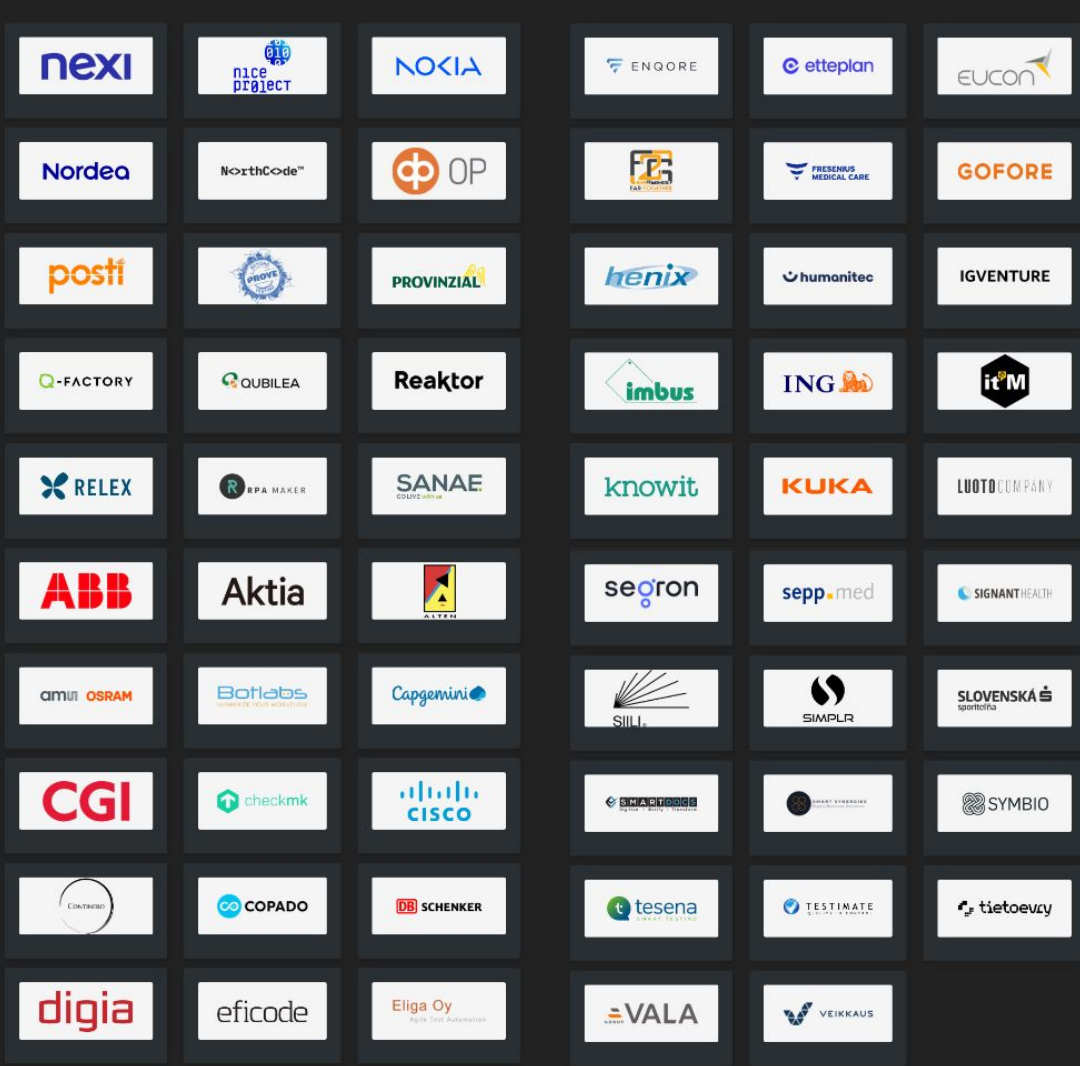
Robocon

- Yearly conference in Helsinki, FI
- Workshop day
- Open Space day
- 2 conference days



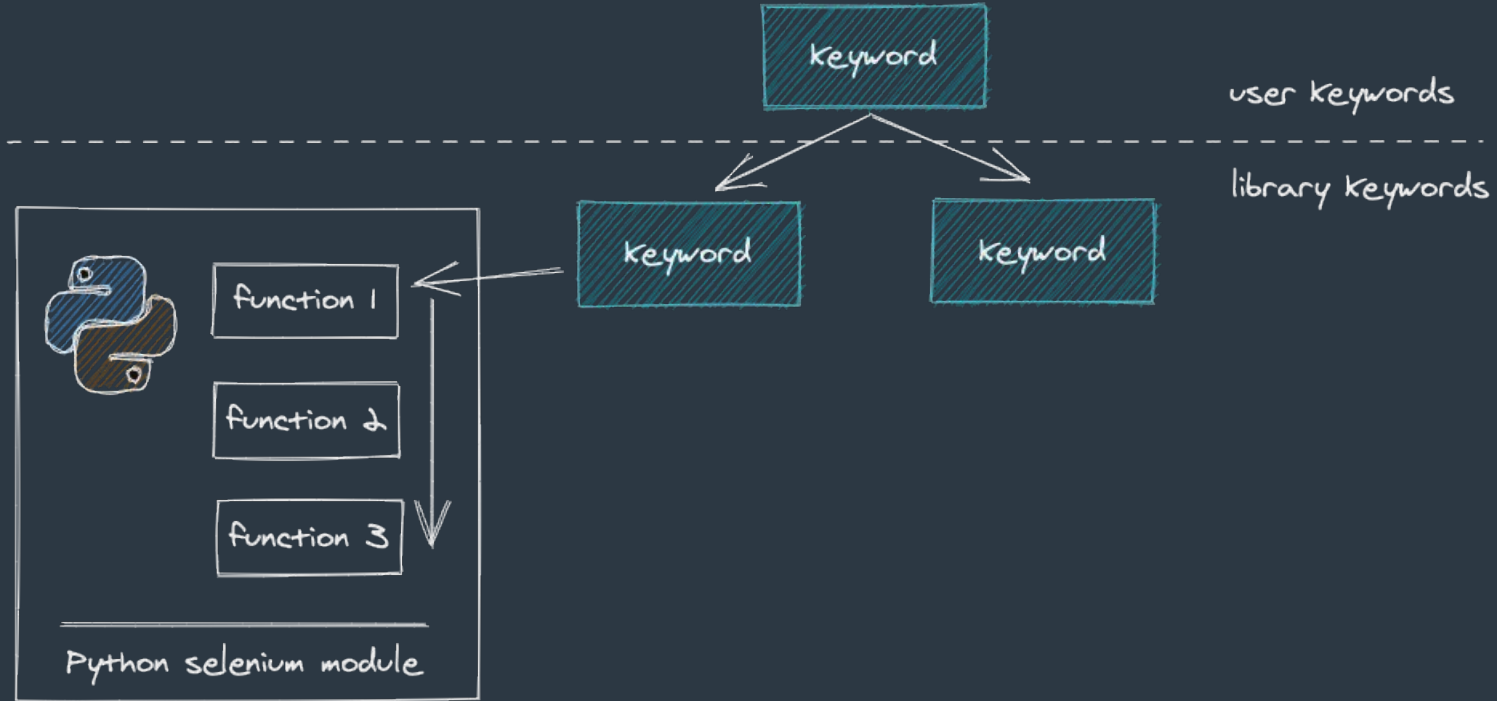
Robot Framework Foundation

- ⬢ > 60 companies
- ⬢ Pay developers
- ⬢ Sponsors events
- ⬢ Supports contributions
- ⬢ Protects Robot Framework



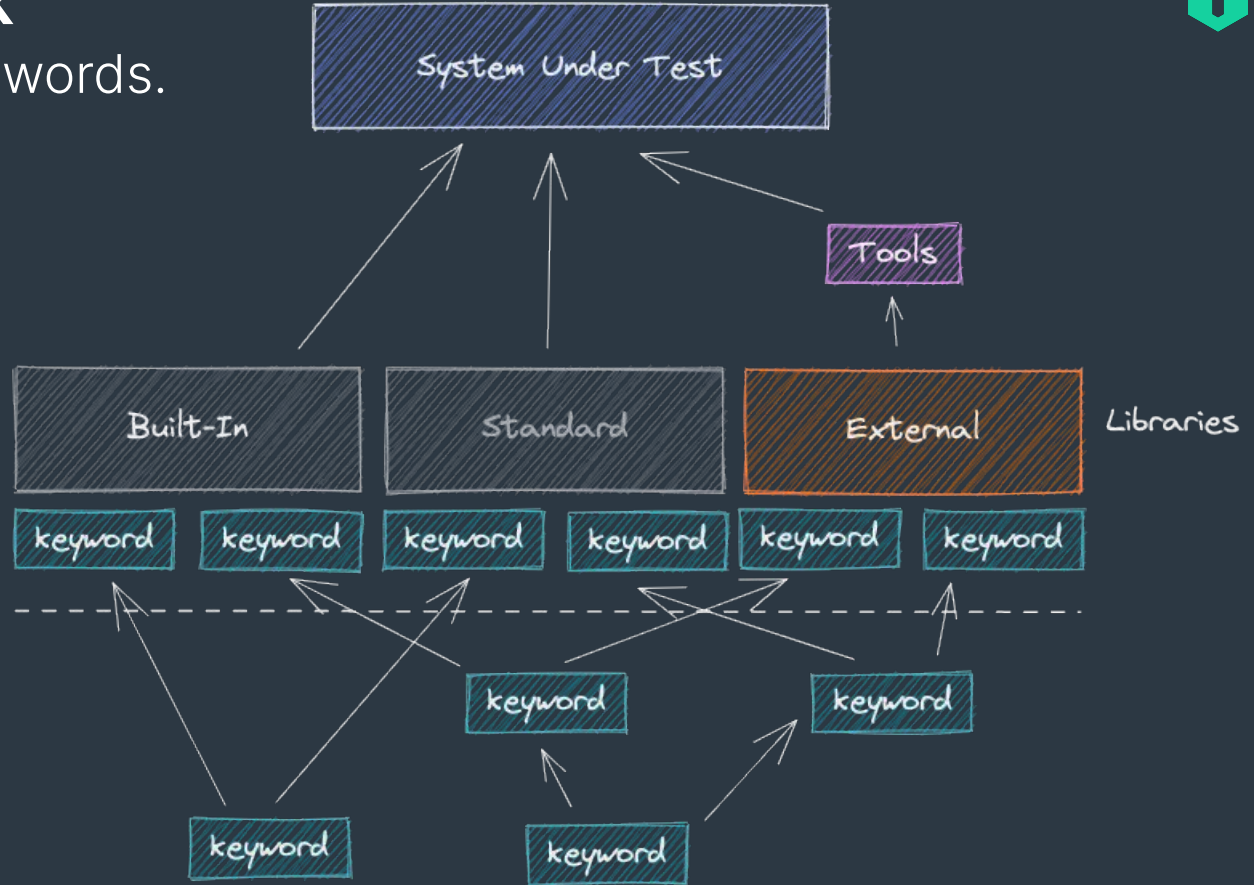
Robot Framework

Keywords **encapsulate** Python code.



Robot Framework

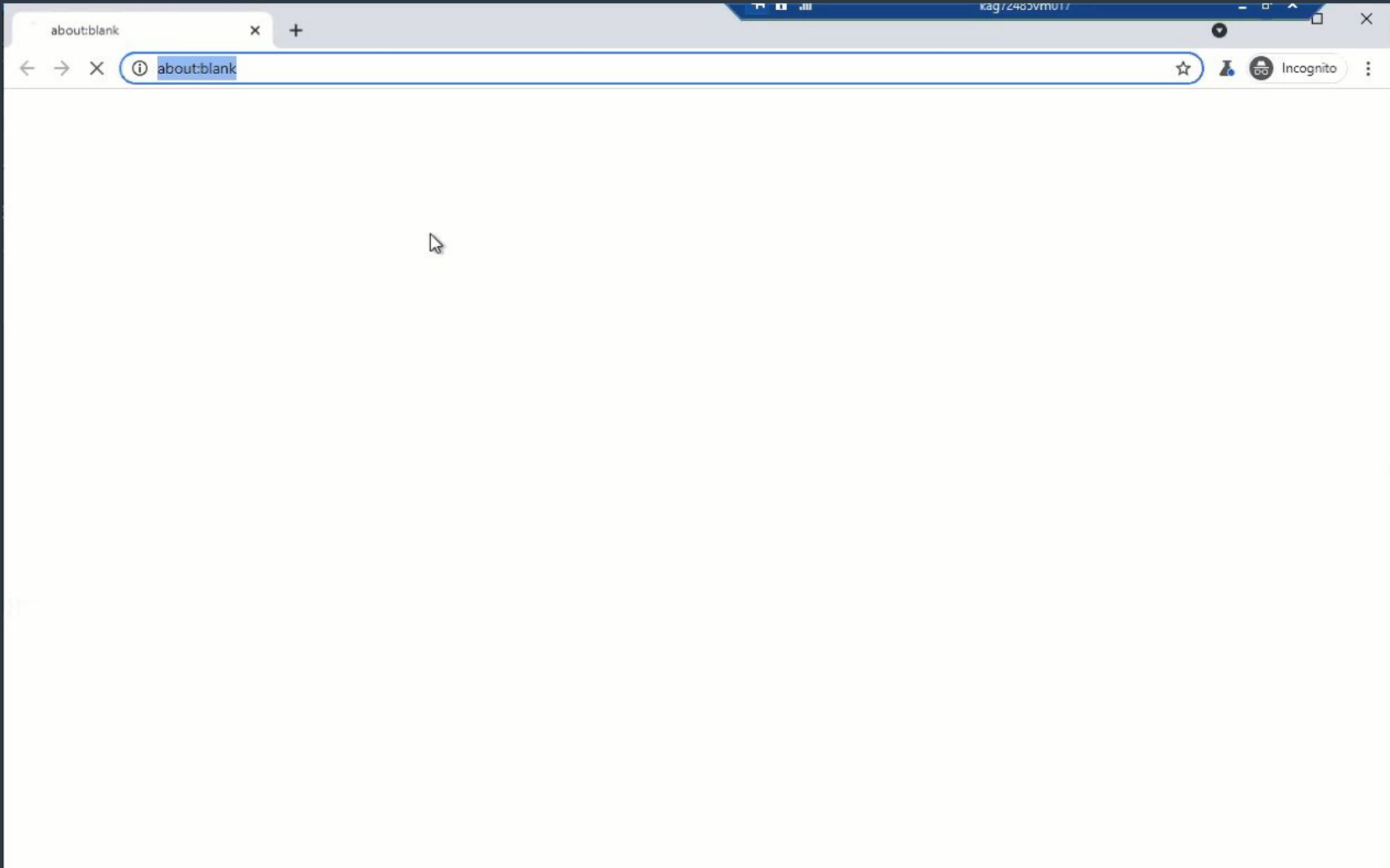
Libraries **organize** keywords.



Robot Framework

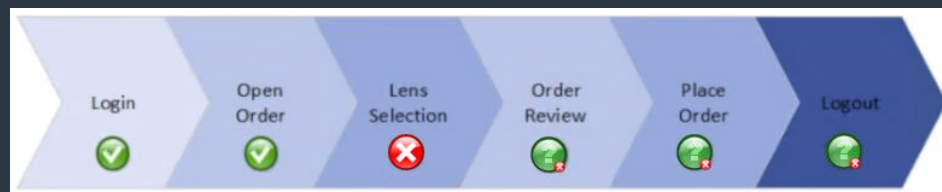


- Web automation (SeleniumLibrary, Playwright)
- Desktop/OS automation
- by Win32 API (FlaUI, Zoomba.Desktop, AutoIT)
- by Image pattern recognition (ImageHorizonLibrary)
- Network (SSH, REST, SOAP, Telnet, ...)
- Kubernetes (KubernetesLibrary)
- PDF/Image comparison (DocTest library)
- CryptoLibrary (encrypt sensitive data)
- many more...
- self-written libraries (Python functions become keywords)





OK	E2E VISUSTORE Calculation - CalcEngine		OK - □ [T] 'CalcEngine': PASS (last execution: 04/22 14:35:31) , runtime=3.66s
OK	E2E VISUSTORE Calculation - Close Order		OK - □ [T] 'Close Order': PASS (last execution: 04/22 14:35:34)
OK	E2E VISUSTORE Calculation - Enter Order Data		OK - □ [T] 'Enter Order Data': PASS (last execution: 04/22 14:35:20)
OK	E2E VISUSTORE Calculation - Input FrameData		OK - □ [T] 'Input FrameData': PASS (last execution: 04/22 14:35:27)
OK	E2E VISUSTORE Calculation - Lens Type Selection		OK - □ [T] 'Lens Type Selection': PASS (last execution: 04/22 14:35:23) , runtime=3.25s
OK	E2E VISUSTORE Calculation - Login		OK - □ [T] 'Login': PASS (last execution: 04/22 14:35:16) , runtime=5.85s
OK	E2E VISUSTORE Calculation - LogOut		OK - □ [T] 'LogOut': PASS (last execution: 04/22 14:35:39)
OK	E2E VISUSTORE Calculation - Open Order		OK - □ [T] 'Open Order': PASS (last execution: 04/22 14:35:18) , runtime=2.76s
OK	E2E VISUSTORE Calculation - Order Review		OK - □ [T] 'Order Review': PASS (last execution: 04/22 14:35:32) , runtime=0.98s
OK	E2E VISUSTORE Calculation - Place Order		OK - □ [T] 'Place Order': PASS (last execution: 04/22 14:35:34) , runtime=2.49s
OK	E2E VISUSTORE Calculation - Shape and Bevel		OK - □ [T] 'Shape and Bevel': PASS (last execution: 04/22 14:35:24)





Anmeldung

Anmeldename:


Kennwort:

Umgebung:

Sprache:

Merkmal-Nr.:

About ELAR



IGS GmbH
Informatik für Sozialversicherungen

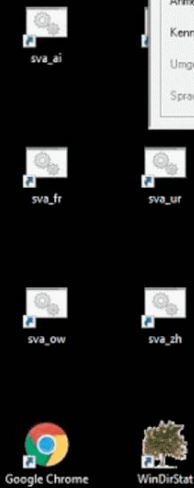
msg
life

FILENET

Archiv

Version: Piz Buin Release: 7.80.5

Achtung: Dieses Programm ist urheberrechtlich geschützt.
Unbefugte Vervielfältigung oder unbefugter Vertrieb dieses
Programmes oder eines Teils davon sind strafbar und
werden straf- und zivilrechtlich verfolgt.





“The decision for
Robot Framework
is **NOT** a decision
for a software vendor.

It's the decision for the
LINGUA FRANCA
of test automation.”



The Robotmk project

Past and today



The Robotmk Project



The Robotmk Project

Past, today and the future



◆ Past: one man show

- ◇ Prototype presented at Robocon 2020
- ◇ Good perception, first customer projects
- ◇ Checkmk integration was as good as it could, based on MKP
- ◇ Customer driven development

◆ Since mid 2022: Cooperation with Checkmk

- ✓ Deeper **integration**
- ✓ Code **quality**
- ✓ **Faster** development
- ✓ More **features**



Robotmk in Checkmk 2.3





Robotmk in Checkmk 2.3

Goals & Features

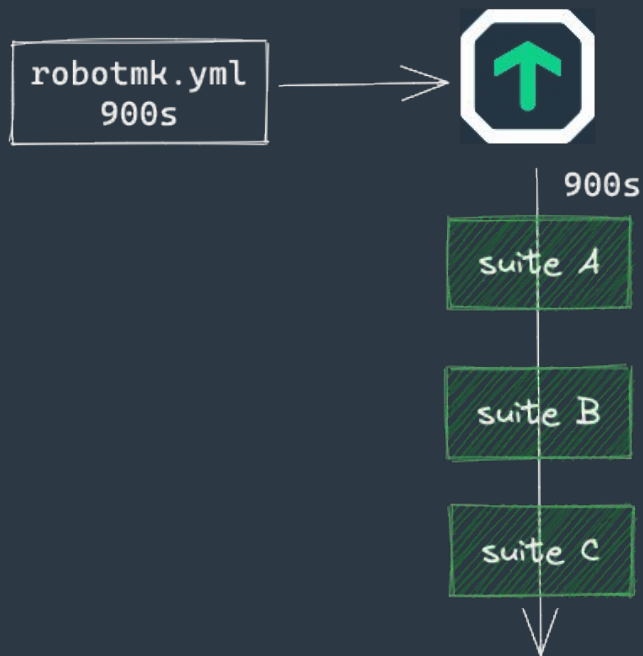
- ◆ Main Goal: deeper integration with the features of V1
- ◆ Complete rewrite (Rust)
- ◆ Focus on Windows (main use case), Linux later
- ◆ Main Features:
 - ◇ **Robotmk Scheduler:** individual execution intervals
 - ◇ **Integration of RCC:** individual Python environments

⇒ **DEMO:** Integration of a web based test into Checkmk



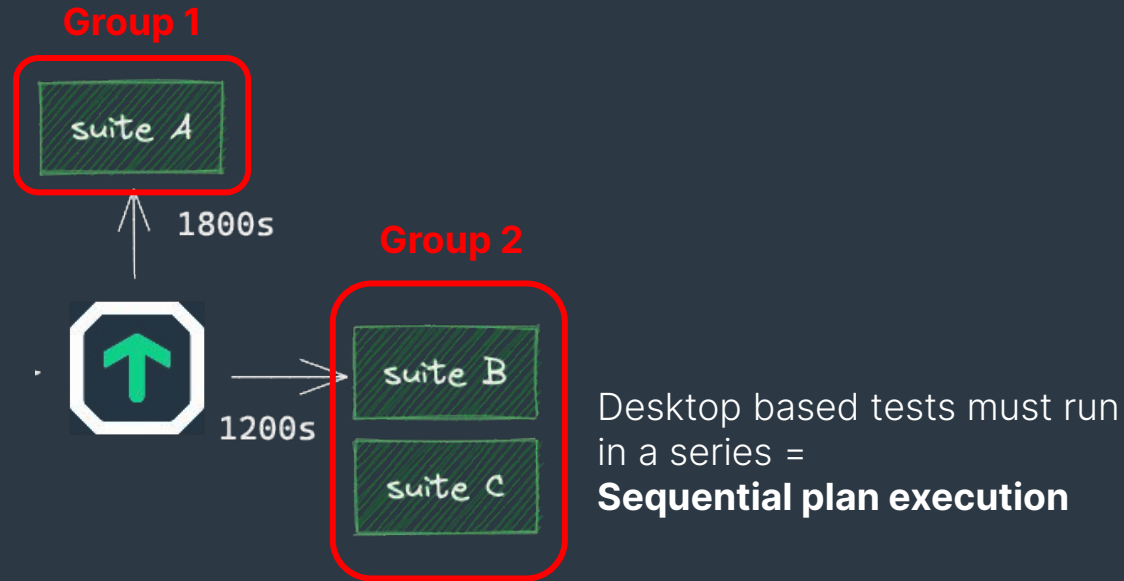
Robotmk in Checkmk 2.3

Execution: Robotmk v1



Robotmk in Checkmk 2.3

Sequential & Parallel Plan Execution



⇒ Robotmk Scheduler does not execute suites/plans, but **execution groups!**

Synthetic Monitoring as a Product in Checkmk 2.3





Synthetic Monitoring

Product and pricing

- ◆ Already Included in **Enterprise, Cloud** (on prem) and **MSP** editions
- ◆ **Free Tier:** Test all features with up to 3 discovered test services
- ◆ **> 3 tests:**
 - ◇ **Subscription** required, includes **support for Robotmk** (not RF)
 - ◇ Starts with €150/month
 - ◇ **Pricing highly depends on the use case ⇒ contact sales**

Outlook





Outlook

Planned Features

Most relevant:

- ◆ **Integrated Robot Management**
 - ⇒ upload RF suites into Checkmk, deploy via bakery
- ◆ **Improved keyword monitoring**
 - ⇒ make metrics more robust against renamings
 - ⇒ KPI monitoring: Discover the states of SLA relevant keywords
- ◆ **More insights** into Synthetic Monitoring Data
 - ⇒ more Dashboards & Views
 - ⇒ Support RF Metadata for custom visualizations
 - ⇒ add HTML to into Notifications



THANK YOU!

Robot Framework: <https://robotframework.org>

Repository: <https://github.com/elabit/robotmk>

Robotmk Blog: <https://blog.robotmk.org>

Checkmk Documentation: <https://docs.checkmk.com/latest/de/robotmk.html>



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